

ABSTRACT

The present invention integrates a gasification unit into a catalyst/absorber process for removing pollutants from the combustion product of a gas turbine. A small slipstream of syngas from the gasification unit is cleaned in an acid gas removal unit to remove H_2S . The syngas is then processed in a shift unit where the carbon monoxide and any COS present in the syngas are converted into hydrogen and carbon dioxide. The shifted syngas, still containing trace amounts of H_2S , is then processed in a zinc oxide bed, where the trace H_2S is removed. The resultant stream is hydrogen and carbon dioxide rich, making it ideal for use in regenerating the catalyst/absorber system.